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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/912,666 | 07/23/2001 | Georg Koepff | 10191/1893 | 6421 |

26646 7590 08/15/2003

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| EXAMINER |
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NGUYEN, XUAN LANT

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| ART UNIT | PAPER NUMBER |
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3683

DATE MAILED: 08/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,666

Applicant(s)

KOEPFF ET AL.

Examiner

Lan Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 16 June 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on 6/16/03. These drawings are approved.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation, "in a fault condition", should be --in the fault condition--. This limitation was rejected in Office Action dated 3/25/03 as a common defect in claims 1-9. Other claims have been amended to correct the defect. However, claims 4 and 5 remain uncorrected.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 2 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kondo et al.

Kondo et al. show a method of controlling wheel brakes, as in the present invention, comprising: ECU 39 is generating control signals to control the wheel brakes 34 via valve 1. When there exist an electric failure, valve 11 is actuated to isolate accumulator 30 from pump 31, column 4, lines 61-66 and column 1, lines 55-60. Kondo's method of brake control would limit the speed of the vehicle (i.e. normal braking mode).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3, 4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boehringer in view of Maisch et al.

Re: claim 1, Boehringer shows a method for controlling wheel brakes, as in the invention, comprising: generating control driving signals for the first group of valve arrangement 16 and a second group of valve arrangement 18; when a fault is detected (i.e. pressure falls below a threshold level, Abstract, lines 7 and 8), a power for an activation of the one of the valve arrangements originating from the second power circuit, Abstract, lines 8-12. Boehringer lacks a warning is generated to inform a driver

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of fault detection. Maisch et al. teach in column 5, line 25 that a warning is generated to inform a driver of fault detection in the form of warning light 44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Boehringer's method to include a step of generating a warning to inform a driver of fault detection as taught by Maisch so that correction or maintenance can be performed on the vehicle to correct the default.

Re: claims 3, 6 and 8, Boehringer shows in the Abstract, that the switching valves switch the control of the first axle to the second axle, and vice versa, depending on the location of the fault.

Re: claim 4, Boehringer shows a method for controlling wheel brakes, as in the invention, comprising: generating control driving signals for the first group of valve arrangement 16 and a second group of valve arrangement 18; when a fault is detected (i.e. pressure falls below a threshold level, Abstract, lines 7 and 8), a power for an activation of the one of the valve arrangements originating from the second power circuit, Abstract, lines 8-12. Maisch et al. teach that based on the faulty conditions, different methods of controlling is being used to control the braking force (i.e. limiting the speed). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Boehringer's method to have including steps to control the braking force based on different faulty conditions to further enhancing the safety of the vehicle as taught by Maisch.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. in view of Corio et al.

Kondo's method of controlling wheel brakes, as discussed in the rejection of claim 2, is silent of a step of controlling the front brakes by a control module of the rear brakes. Corio et al. teach the concept of having independent controllers BSCU1 and BSCU2 wherein the two controllers serve as a back up for the other in case of emergency. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have including a step of controlling the front brakes by a control module of the rear brakes in the method of Kondo in order to have a back-up to control the wheel brakes in case of emergency such as failure of one of the controllers as taught by Corio.

9. Claims 1, 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable by Corio et al. in view of Maisch et al.

Re: claims 1, 3 and 6, Corio et al. show a method for controlling wheel brakes, as in the present invention, comprising: a first and a second valve arrangements as left and right brakes; wherein the first and second valve arrangements having an independent power supply AC1, DC1 and AC2, DC2, respectively. From column 1, line 66 to column 2, line 5, Corio discloses that a power source ACess, DCess is from a parallel combination of AC1, DC1 and AC2, DC2 wherein this power source would be used in case of failure of either of the AC1, DC1 and AC2, DC2 sources. Corio further shows control units BSCU1 and BSCU2 as redundant control units capable of controlling either the first or the second valve arrangement. Corio et al. lack a warning is generated to inform a driver of fault detection. Maisch et al. teach in column 5, line 25 that a warning is generated to inform a driver of fault detection in the form of warning light 44. It would

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have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Corio's method to include a step of generating a warning to inform a driver of fault detection as taught by Maisch so that correction or maintenance can be performed on the vehicle to correct the default.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corio et al. in view of Maisch et al. and further in view of Boehringer et al.

Corio's method of brake control, as discussed in the above rejection of claim 1, is silent of the step of activating an additional valve arrangement corresponding to front wheel brakes. Boehringer teaches in the "Background of the Invention", column 1, lines 40-48, that it is old and well known in the aircraft brake art to have redundancy of equipments in order to meet safety requirement and to carry out a braking action in case of emergency. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a step of activating an additional valve arrangement in the method of brake control of Corio in order to meet safety requirement and to carry out a braking action in case of emergency as taught by Boehringer.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable by Corio et al. in view of Maisch et al.

Corio et al. show a computer program for controlling wheel brakes, as in the present invention, comprising: a first and a second valve arrangements as left and right brakes; wherein the first and second valve arrangements having an independent power supply AC1, DC1 and AC2, DC2, respectively. From column 1, line 66 to column 2, line 5, Corio discloses that a power source ACess, DCess is from a parallel combination of

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AC1, DC1 and AC2, DC2 wherein this power source would be used in case of failure of either of the AC1, DC1 and AC2, DC2 sources. Corio further shows control units BSCU1 and BSCU2 as redundant control units capable of controlling either the first or the second valve arrangement. Note that the phrase "computer program" has been interpreted broadly to be the same as Applicant wherein Corio discloses BSCU1 and BSCU2 as digital brake control units; inherently, in order to accomplish the controlling, a computer program is in place to perform all the controlling tasks. Corio et al. lack a warning is generated to inform a driver of fault detection. Maisch et al. teach in column 5, line 25 that a warning is generated to inform a driver of fault detection in the form of warning light 44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Corio's method to include a step of generating a warning to inform a driver of fault detection as taught by Maisch so that correction or maintenance can be performed on the vehicle to correct the default.

Response to Arguments

12. Applicant's arguments filed 6/16/03 have been fully considered but they are not persuasive. Applicant argues that Boehringer's system does not disclose an electrical system. Claim 1 does not require an electric system. Claim 1 claims first and second power circuits (not electrical power circuits); and **one of** valve arrangements, a pressure supply, and an electrical system. Applicant further argues that Kondo does not disclose an electrical failure, lines 55-60 of column 1 specifies an electrical failure. The

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rejections have been modified including Maisch et al. to meet the amended feature of a warning.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 8 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers


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for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.

XLN

XLN
August 11, 2003


JACK LAVINDER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600